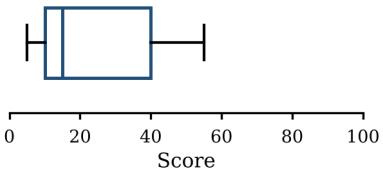
Day 151	A Tier 10-a-day
1 A circular pond has radius 2 m. Work out, in terms of π, (a) the circumference, (b) the area.	
2 Solve the simultaneous equations $-6x + 2y = -18$ $-4x + 4y = -12$	
3 Convert 15000 mm^2 into cm^2.	
4 (a) Write 72 and 60 as products of prime factors. (b) Find the highest common factor (HCF) and the lowest common multiple (LCM) of 72 and 60.	
5 M is the midpoint of AB. A is the point $(2, -2)$ and M is the point $(4, 2)$. Work out the coordinates of B.	

Day 151 **A Tier 10-a-day**

6 The box plot shows the scores of the students in Class A in a test.
(a) Write down the median and the interquartile range.
For Class B the median is 5 and the interquartile range is 20.
(b) Compare the distributions of the two classes.



7 A metal block has mass 670 g and volume 84 cm^3. The mass is measured to the nearest 10 grams and the volume to the nearest cm^3.
(Calculator)
Work out the upper bound for the density of the metal in g/cm^3.
Give your answer correct to 3 significant figures.

8 y is directly proportional to the square root of x.
When x = 4, y = 18.
(a) Find a formula for y in terms of x.
(b) Work out the value of y when x = 36.

9 Prove that the sum of the squares of two consecutive odd numbers is always 2 more than a multiple of 8.

10 Work out $(1\frac{1}{6} + 1\frac{1}{6}) \times 4\frac{1}{2}$
Give your answer as a mixed number in its simplest form.